# F.Y.I.

FOR YOUR INFORMATION

## UNDEREMPLOYMENT – *Measuring the Strength of the Economic Expansion*

In May 2005, Idaho's unemployment rate slipped below the 4 percent mark that many view as full employment and continued a steady decline. As the rate hit 3.5 percent a year later, help wanted signs were becoming increasingly common at businesses throughout the state, and there were early signs that some areas would soon experience certain skill shortages.

The Idaho economy has been generating jobs at one of the fastest rates in the country. The state led the nation in job creation during the second quarter of 2006 as the unemployment rate dropped below 3.5 percent and headed toward record lows under 3 percent in 2007.

Lower-paying jobs were becoming harder and harder to fill as competition for qualified workers in higher-paying industries intensified and the pool of available labor shrank. Post-secondary education institutions reported declining enrollment as potential students opted for full-time employment in what was quickly becoming a worker's job market. The number of skilled machinists, welders and other tradesmen was not increasing at a rate to keep pace with manufacturing expansion and a red hot construction sector.

Even wages in what is known as one of the low-wage states of the Intermountain West began rising in late 2004 and were averaging over $200 a month higher in early 2006 than the year before.

The number of unemployed dropped to its lowest level since 1976 when the statewide labor force was only half the size it is today.

All this created concerns about where the workers would come from to keep Idaho's dramatic economic expansion going. And it turned attention on the quality of the 85,000 jobs the expansion produced in the last four years.

The unemployment rate is near rock bottom so clearly people are working. Nearly 68 percent of Idaho's residents over 15 are either working or looking for work — two percentage points higher than the national labor force participation rate.

But while the economy has been expanding, the share of Idaho workers holding multiple jobs has been among the highest in the nation. At 8 percent, Idaho ranked ninth in 2005, the most recent statistic. That was down from 8.6 percent in 2004, which ranked sixth nationally. In 2003, the rate was 8.1 percent, ranking 10th. Depending on individual circumstances, multiple job holders could be considered underemployed.

Determining the level of underemployment would provide both a measure of the quality of jobs the economy is creating and the potential pool of additional workers, who could be tapped by new or expanding employers if their wage and working conditions were right.

Regional Economists Doug Tweedy in Lewiston and John Panter in Meridian developed a statistical method to quantify underemployment in terms of people looking for full-time jobs but are working part-time or temporary jobs and people who are employed in jobs with wages, benefits or responsibilities below their training level.

The underemployed are already working but are underpaid, lack benefits or are disgruntled for any number of reasons. As a result, they offer a window on the quality of jobs being generated while representing a pool of labor in addition to the unemployed that economic developers and existing businesses can take advantage of under the right conditions.

The underemployed can be critical in periods of extremely low unemployment because they represent a reserve of workers to staff economic expansion that can otherwise be thwarted if companies simply look at the unemployment rate and assume they will not be able to find an adequate work force.

The monthly labor force report provides data only on whether people are working and nothing about the quality of their jobs or whether they are full-time or part time. Being able to estimate by county the number of underemployed — and therefore likely interested in other, better jobs — is an asset in continuing Idaho's economic expansion and employment growth.

To these ends, Tweedy and Panter developed an underemployment model. It relies on job applications and job orders filed with the 24 local Labor Department offices, focusing on part-time and full-time job opportunities and job seekers with associate degrees or higher who have jobs but are looking for new ones.

The ratio between part-time and full-time job listings is used to determine the ratio of part-time and full-time workers in the county.

The factor of employment qualifications is determined by quantifying the job seekers with associate degrees or higher who are currently employed but still looking for another job. Those workers are identified from the job search registrations with the local office.

The number of people with jobs and education who are still looking for work and the number involuntarily

working part-time or temporary full-time jobs under 150 days are a county's underemployed. That total divided by the total number of people working in the county provides the underemployment rate.

While this model has its limitations, especially in evaluating smaller counties, it uses already available data, providing a consistent and automated, cost-effective approach to quantifying the underemployed.

Statewide, the model shows that in 2003, the first full year after the end of the national recession, there were more than 119,000 underemployed workers — 18.2 percent of total employment — on top of the 36,600 people out of work, or 5.3 percent of the labor force.

Two years later, the labor force had grown by 46,000, but the number of underemployed dropped by almost 22,000 to 97,400 while the number of unemployed was down more than 8,000 to about 28,000.

That translates into 76,000 people finding jobs or getting better jobs over two years. While suggesting the quality of jobs was good, the experience county by county was varied. While the unemployment rate fell in every county, some markedly, over the two years, the underemployment rate did not drop across the board. Seven of the 44 counties showed higher underemployment rates and one showed no change.

In 2006, the statewide labor force grew by another 10,500 while the number of underemployed dropped by 2,600, matching the decline in the number of unemployed. But again, the direction of underemployment varied among the counties. Twenty-one counties showed increases from 2005 and two remained unchanged.

## CASE STUDIES

### *ADA COUNTY*

In 2003, the underemployment rate in Ada County, the state's largest business and labor center, was 15.9 percent, about 27,000. By 2005, it had declined by 7,100 to 10.8 percent even as the total labor force grew by 11,000, indicating the economy was creating better jobs.

The data showed fewer part-time or temporary jobs being listed with the local Labor Department offices. In Ada County, 66 percent of the jobs were full-time in 2003. That was up to 74 percent in 2005

As for job seeker qualifications, 3.4 percent of workers in 2003 had associate or higher degrees and were looking for other jobs. In 2005, that number had increased to 3.7 percent. Wile the actual number of workers in this situation should increase as the labor force increases, their percentage of the full-time labor force should not if new job quality is good.

The fact that the percentage of those workers rose from 2003 to 2005 could indicate that while a lot of jobs were created, their quality was less than what was hoped.

### *KOOTENAI COUNTY*

In Kootenai County, underemployment kept pace with labor force expansion.

In 2003 the underemployment rate calculated by the model was 10.2 percent. About 27 percent of the jobs were part-time, and 4.4 percent of the full-time workers with associate degrees or better were looking for other jobs.

Two years later, the labor force had grown by 10 percent and unemployment was down over two percentage points to 4.2 percent. Nearly 7,000 more people were working in Kootenai County in 2005 than in 2003.

But the number of part-time jobs was up to 31 percent, and 4.7 percent of the full-time workers with associate degrees or better were looking for other jobs.

The result — the underemployment rate held at 10.2 percent, again suggesting that new job quality may not have been as high as expected. It also illustrates the shortcomings of using total employment to assess the quality of jobs.

Because underemployment has been conceptualized and estimated in so many ways, precise figures on its extent have not been readily available. The Idaho Department of Labor's 24 local offices have the information on the job market and applicant pool that enables part-time and temporary workers to be quantified, the conditions and number of jobs assessed, wage information accumulated and applicant education characteristics identified.

This information from employers and applicants is the most accurate data available on the composition of Idaho's state and local labor markets.

## ASSUMPTIONS

But in calculating underemployment, several assumptions are required.

Total county employment by residence as calculated by the U.S. Bureau of Labor Statistics is the starting point. The total labor force figure was not used because it includes those who are unemployed, and this model attempts to measure only underemployment.

It is assumed that the job orders and applicant data received by the 24 local offices reflect the actual mix of the local economy's part-time and full-time jobs and qualifications of the work force.

Job orders that were part-time, temporary or full-time lasting for less than 150 days were presumed to be filled by workers wanting permanent full-time jobs and took these part-time or temporary jobs involuntarily because they felt nothing else was available. That makes them underemployed.

The model assumes that people working part-time jobs for over 150 days are doing so voluntarily because

they knew going in that it was a long-term part-time job.

Currently employed people who have associate degrees or higher and have filed job applications are assumed to be looking for work because they want a new or better job in terms of wages or benefits or responsibilities related to their field of training. That makes them underemployed.

This model does not try to measure holiday and seasonal workers because they are not considered underemployed since it is assumed this is all they wish to work. The model attempts to measure the underemployment rate of the workers who are in the labor force all year, not just for a few months at a time.

For a few counties that are long distances from a local Labor Department office, the model does not work as well. Those counties are Bear Lake, Oneida, Franklin, Camas, Caribou, Butte and Clark.

Because underemployment is subjective, no wage data was used to avoid the likelihood that an extremely high rate of people would claim underemployment if wages were the only variable used. Even without specific wage data, however, it is believed the model captures the effect of lower wages in the components of involuntary part-time workers and educated employed job seekers looking for work since wages are likely to be a factor in both situations.

In addition, the number of employed job seekers with education who are looking for work is underestimated. Only those who have come through a Labor Department local office are counted, and clearly other employed workers with degrees are looking for better jobs, just not through the Labor Department system.

FYI Table 1 below and continued on page 29 provides underemployment numbers and percentages by county for 2003, 2005 and 2006. The state map on page 30 illustrates the current underemployment picture.

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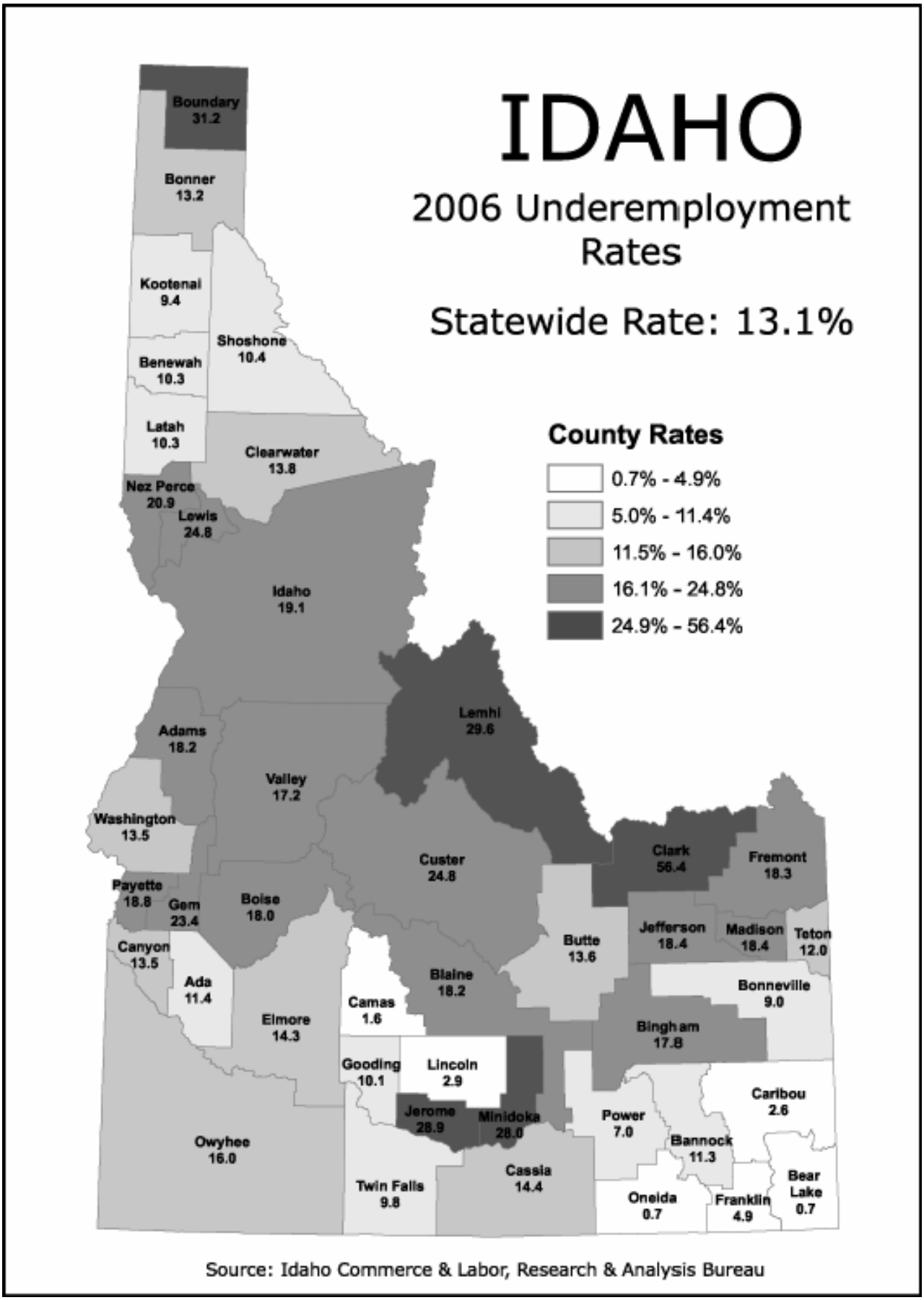
FYI Table 1: Underemployment by County (part 1)

| County | 2006 Rate | 2006 Number | 2005 Rate | 2005 Number | 2003 Rate | 2003 Number | Percentage Point Change in Rate 03-'05 | Percentage Point Change in Rate 05-'06 |
|---|---|---|---|---|---|---|---|---|
| **Northern Idaho** | | | | | | | | |
| Benewah | 10.3% | 415 | 15.0% | 571 | 15.3% | 541 | -0.3% | -4.7% |
| Bonner | 13.2% | 2,627 | 10.9% | 2,161 | 16.4% | 2822 | -5.5% | 2.3% |
| Boundary | 31.2% | 1,231 | 18.6% | 739 | 23.2% | 882 | -4.6% | 12.6% |
| Kootenai | 9.4% | 6,254 | 10.2% | 6,606 | 10.2% | 5921 | 0.0% | -0.8% |
| Shoshone | 10.4% | 555 | 10.0% | 542 | 13.8% | 675 | -3.8% | 0.4% |
| **North Central Idaho** | | | | | | | | |
| Clearwater | 13.8% | 422 | 13.8% | 425 | 14.0% | 408 | -0.2% | 0.0% |
| Idaho | 19.1% | 1,278 | 21.9% | 1,477 | 18.5% | 1162 | 3.4% | -2.8% |
| Latah | 10.3% | 1,858 | 13.1% | 2,314 | 16.8% | 2592 | -3.7% | -2.8% |
| Lewis | 24.8% | 420 | 28.0% | 480 | 23.7% | 382 | 4.3% | -3.2% |
| Nez Perce | 20.9% | 3,795 | 21.0% | 3,838 | 30.7% | 5508 | -9.7% | -0.1% |
| **Southwestern Idaho** | | | | | | | | |
| Ada | 11.4% | 21,538 | 10.8% | 19,827 | 15.9% | 26939 | -5.1% | 0.5% |
| Adams | 18.2% | 355 | 11.3% | 198 | 22.1% | 356 | -10.8% | 6.9% |
| Boise | 18.0% | 664 | 7.0% | 254 | 9.6% | 321 | -2.6% | 11.0% |
| Canyon | 13.5% | 10,673 | 15.6% | 11,799 | 21.7% | 14997 | -6.1% | -2.0% |
| Elmore | 14.3% | 1,488 | 14.2% | 1,469 | 19.2% | 1903 | -5.0% | 0.1% |
| Gem | 23.4% | 1,694 | 17.9% | 1,266 | 43.4% | 2885 | -25.5% | 5.6% |
| Owyhee | 16.0% | 774 | 13.2% | 634 | 18.8% | 862 | -5.6% | 2.8% |
| Payette | 18.8% | 1,840 | 24.8% | 2,410 | 27.4% | 2643 | -2.6% | -6.1% |
| Valley | 17.2% | 827 | 17.4% | 784 | 26.8% | 989 | -9.4% | -0.2% |
| Washington | 13.5% | 652 | 16.2% | 771 | 19.1% | 845 | -2.9% | -2.8% |

*Table continued on page 29*

FYI Table 1: Underemployment by County (continued from page 28)

| County | 2006 Rate | 2006 Number | 2005 Rate | 2005 Number | 2003 Rate | 2003 Number | Percentage Point Change in Rate 03-'05 | Percentage Point Change in Rate 05-'06 |
|---|---|---|---|---|---|---|---|---|
| **South Central Idaho** | | | | | | | | |
| Blaine | 18.2% | 2,566 | 21.2% | 2,965 | 22.5% | 2761 | -1.3% | -3.1% |
| Camas | 1.6% | 10 | 23.6% | 139 | 51.5% | 278 | -27.9% | -22.0% |
| Cassia | 14.4% | 1,448 | 12.1% | 1,172 | 14.7% | 1372 | -2.6% | 2.3% |
| Gooding | 10.1% | 853 | 7.7% | 623 | 11.4% | 824 | -3.7% | 2.4% |
| Jerome | 28.9% | 3,022 | 4.8% | 473 | 17.0% | 1573 | -12.2% | 24.1% |
| Lincoln | 2.9% | 72 | 7.2% | 177 | 24.6% | 545 | -17.4% | -4.3% |
| Minidoka | 28.0% | 2,619 | 41.4% | 3,759 | 56.1% | 4917 | -14.7% | -13.4% |
| Twin Falls | 9.8% | 3,832 | 17.5% | 6,372 | 17.7% | 6098 | -0.2% | -7.7% |
| **Southeastern Idaho** | | | | | | | | |
| Bannock | 11.3% | 4,445 | 13.4% | 5,299 | 15.4% | 5778 | -2.0% | -2.1% |
| Bear Lake | 0.7% | 20 | 0.5% | 15 | 0.6% | 17 | -0.1% | 0.2% |
| Bingham | 17.8% | 3,548 | 25.8% | 5,386 | 16.1% | 3119 | 9.7% | -8.1% |
| Caribou | 2.6% | 85 | 22.2% | 706 | 12.1% | 388 | 10.1% | -19.6% |
| Franklin | 4.9% | 297 | 0.5% | 31 | 13.4% | 757 | -12.9% | 4.3% |
| Oneida | 0.7% | 16 | 0.7% | 16 | 0.8% | 15 | -0.1% | 0.0% |
| Power | 7.0% | 257 | 21.8% | 796 | 12.1% | 414 | 9.7% | -14.8% |
| **East Central Idaho** | | | | | | | | |
| Bonneville | 9.0% | 4,075 | 10.4% | 4,966 | 14.6% | 6431 | -4.2% | -1.4% |
| Butte | 13.6% | 156 | 2.3% | 27 | 14.3% | 174 | -12.0% | 11.3% |
| Clark | 56.4% | 288 | 2.4% | 12 | 1.0% | 5 | 1.4% | 54.0% |
| Custer | 24.8% | 611 | 3.7% | 93 | 9.0% | 211 | -5.3% | 21.1% |
| Fremont | 18.3% | 1,054 | 11.9% | 714 | 37.6% | 2056 | -25.7% | 6.4% |
| Jefferson | 18.4% | 1,832 | 10.4% | 1,077 | 29.9% | 2,841 | -19.5% | 8.0% |
| Lemhi | 29.6% | 1,123 | 18.3% | 711 | 42.6% | 1,500 | -24.3% | 11.3% |
| Madison | 18.4% | 2,639 | 11.9% | 1,755 | 12.8% | 1,675 | -0.9% | 6.6% |
| Teton | 12.0% | 543 | 35.6% | 1,542 | 25.7% | 1,039 | 9.9% | -23.6% |
| **Statewide Avg.** | **13.1%** | **94,771** | **13.7%** | **97,392** | **18.2%** | **119,187** | **-4.5%** | **-0.6%** |
| **# Unemployed** | | **25,600** | | **28,200** | | **36,600** | | |
| **Unemployment Rate** | **3.4%** | | **3.8%** | | **5.3%** | | | |
| **Work Force** | | **749,200** | | **738,700** | | **692,700** | | |




Source: Idaho Commerce & Labor, Research & Analysis Bureau